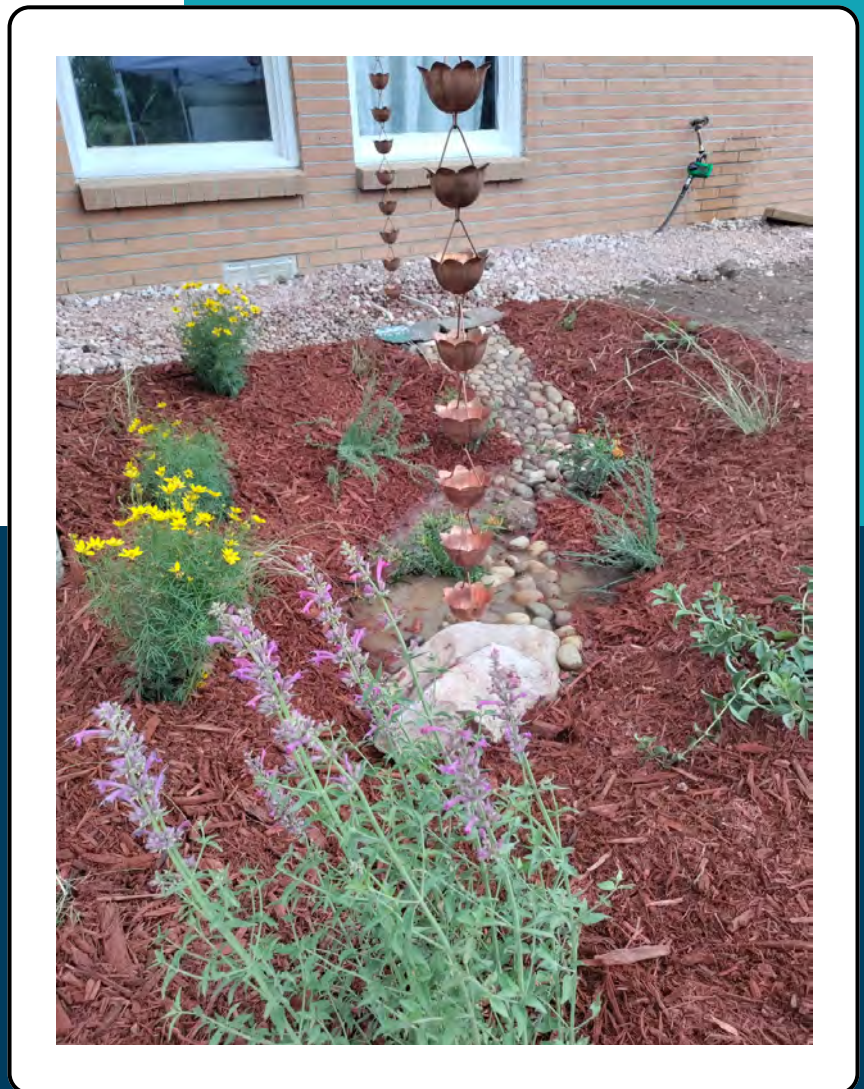


OCTOBER 2022

RESIDENTIAL RAINGARDEN PILOT PROJECT

FULL SUN PLANTING LAYOUT: 2



PRODUCED BY



**COLORADO
WATER CENTER**
COLORADO STATE UNIVERSITY



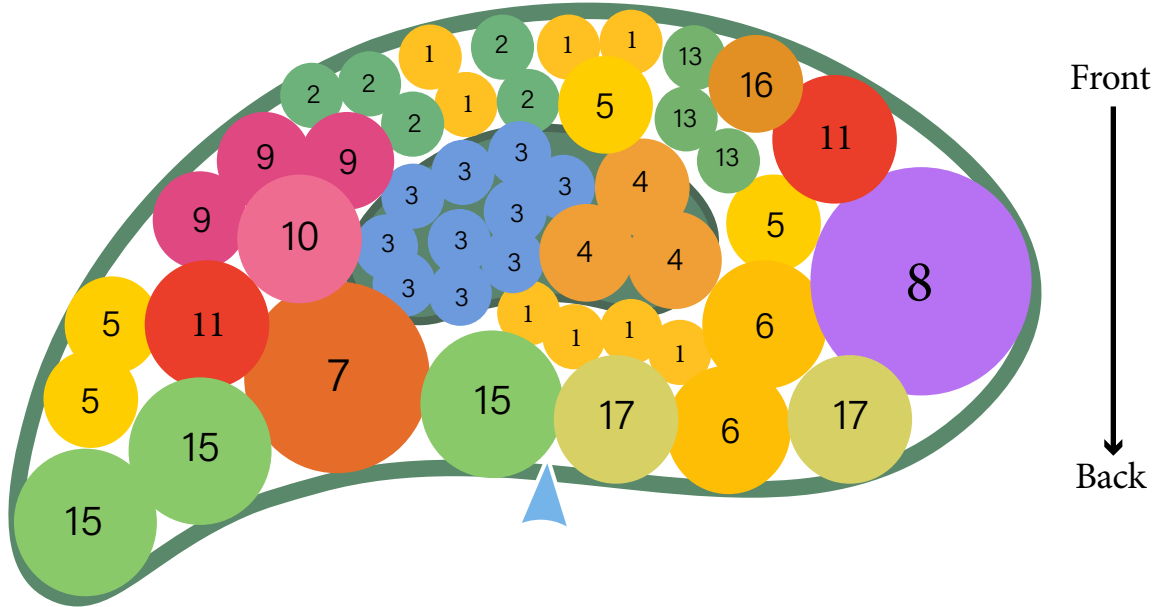
COLORADO
Colorado Water
Conservation Board
Department of Natural Resources



**HORTICULTURE AND
LANDSCAPE ARCHITECTURE**
COLORADO STATE UNIVERSITY

Rain Garden - Full Sun

100ft² - Layout 2



LEGEND

- | | | | |
|----|---|---|-------------------------|
| 1 | Black-eyed Susans (<i>Rudbeckia hirta</i>) | ▲ | Point of Water Entrance |
| 2 | Blue Grama (<i>Bouteloua gracilis</i>) | ● | Low Point of Garden |
| 3 | Blue Flax (<i>Linum lewisii</i>) | ○ | Rain Garden |
| 4 | Butterfly Weed (<i>Asclepias tuberosa</i>) | | |
| 5 | Chocolate Flower (<i>Berlandiera lyrata</i>) | | |
| 6 | Coreopsis Tickseed (<i>Coreopsis spp</i>) | | |
| 7 | Coronado Hyssop (<i>Agastache aurantiaca</i> "Coronado") | | |
| 8 | Desert Four o'Clock (<i>Mirabilis multiflora</i>) | | |
| 9 | Desert Penstemon/Beardtongue (<i>Penstemon pseudospectabilis</i>) | | |
| 10 | Purple Coneflower (<i>Echinacea purpurea</i>) | | |
| 11 | Firecracker Penstemon (<i>Penstemon eatonii</i>) | | |
| 12 | Harebells/Bluebells (<i>Campanula rotundifolia</i>) | | |
| 13 | Indian Ricegrass (<i>Achnatherum hymenoides</i>) | | |
| 14 | Little Bluestem (<i>Schizachyrium scoparium</i>) | | |
| 15 | Switchgrass (<i>Panicum virgatum</i>) | | |
| 16 | Sunset Hyssop (<i>Agastache rupestris</i>) | | |
| 17 | Yellow Indiangrass (<i>Sorghastrum nutans</i>) | | |

FULL SUN 2 SUBSTITUTION LIST

All Plants on list are Native to the Rocky Mountain/Front Range region

Layout Number	Original Plant	Substitution	Tier	Dimensions	Color
1	Black-eyed Susan	Stiff Tickseed (<i>Coreopsis palmata</i>)	top	3ft tall, 18" spread	Yellow flowers
		Plains Wallflower (<i>Erysimum asperum</i>)	top	3ft tall, 18" spread	Yellow flowers
2	Blue Gramma	Sideoats Grama (<i>Bouteloua curtipendula</i>)	top	2ft tall, 2ft spread	Foliage purple/green
		Hairy Grama (<i>Chondrosium hirsutum</i>)	top	1.5ft tall, 1.5ft spread	Hairy foliage, fluffy grama seedheads
3	Blue Flax	Rocky Mountain Iris (<i>Iris missouriensis</i>)	low	1.5ft tall, 10" spread	Blue flowers
		Rocky Mountain Columbine (<i>Aquilegia caerulea</i>)	mid/low	1.5ft tall, 1ft spread	Light blue and white flowers
4	Butterfly Weed	Golden Columbine (<i>Aquilegia chrysantha</i>)	low	3.5ft tall, 2ft spread	Yellow flowers
		Orange Sneezeweed (<i>Helenium hoopesii</i>)	low	3ft tall, 2ft spread	Yellow, daisy-like flowers
5	Chocolate Flower	Sulphur Buckwheat (<i>Eriogonum umbellatum</i>)	top	1.5ft tall, 2ft spread	Globe-like yellow flowers
		Blanket Flower (<i>Gaillardia aristata</i>)	top/mid	2.5ft tall, 2ft spread	Daisy-like red and yellow flowers
6	Coreopsis	Black-eyed Susan (<i>Rudbeckia hirta</i>)	top	1-2ft tall, 2ft spread	Yellow, daisy-like flowers with dark centers
		Chocolate Flower (<i>Berlandia lyrata</i>)	top/mid	1-2ft tall, 2ft spread	Yellow, daisy-like flowers that smell like chocolate
7	Coronado Hyssop	Desert Penstemon (<i>Penstemon psuedospectabilis</i>)	top	1.5ft tall, 2ft spread	Fuschia/red tubular flowers
		Prairie Coneflower (<i>Ratibida columnifera</i>)	top/mid	2.5ft tall, 2ft spread	Red and yellow flowers with tall seedheads
8	Desert 4 o'Clock	Native Gayfeather (<i>Liatrix punctata</i>)	top	1-2ft tall, 1.5ft spread	fuzzy, lavender flowers
		Plains Larkspur (<i>Delphinium</i> var. <i>ollgophylla</i>)	top	1-2ft tall, 2ft spread	pink spike flowers
9	Desert Penstemon	Prairie Coneflower (<i>Ratibida columnifera</i>)	top/mid	2.5ft tall, 2ft spread	Red and yellow flowers with tall seedheads
		Pearly Everlasting (<i>Anaphalis margaritaceae</i>)	top/mid	2.5ft tall, 2ft spread	Clusters of white button-like flowers
10	Purple Coneflower	Pink Coreopsis (<i>Coreopsis rosea</i>)	top/mid	1-2ft tall, 2ft spread	pastel pink daisy-like flowers
		Rocky Mountain Beeplant (<i>Cleome serrulata</i>)	top/mid	3ft tall, 2ft spread	Purple, spider-like flowers with earthy aroma
11	Firecracker Penstemon	Black-eyed Susan (<i>Rudbeckia hirta</i>)	top/mid	3ft tall, 1.5ft spread	Yellow, daisy-like flowers with dark centers
		Anise Hyssop (<i>Agastache aurantiaca</i>)	top	1.5ft tall, 2.5ft spread	Red/orange flowers
12	Harebells	Showy Fleabane (<i>Erigeron speciosus</i>)	mid/low	1.5ft tall, 1.5ft spread	lavendar, aster-like flowers with yellow center
		Mountain Avens (<i>Dryas octopetala</i>)	top	10" tall, 1ft spread	White flowers, with feathery seedheads
13	Indian Ricegrass	Mountain Muhly (<i>Muhlenbergia montana</i>)	top	1-2ft tall, 1.5ft spread	warm season bunchgrass, 2-6" panicle flower
		Muttongrass (<i>Poa fendleriana</i>)	top	1-2ft tall, 1.5ft spread	hairy seedheads
14	Little Bluestem	Blue Grama	top/mid	1-2ft tall, 1ft spread	grass with fuzzy seedheads
		Muttongrass (<i>Poa fendleriana</i>)	top	1-2ft tall, 1.5ft spread	hairy seedheads
15	Switchgrass	Mountain Muhly (<i>Muhlenbergia montana</i>)	top	1-2ft tall, 1.5ft spread	warm season bunchgrass, 2-6" panicle flower
		Little Bluestem (<i>Schizachyrium scoparium</i>)	top	2.5ft tall, 2ft spread	blue-ish stems turn reddish brown when mature
16	Sunset Hyssop	Desert Penstemon (<i>Penstemon psuedospectabilis</i>)	top	1.5ft tall, 2ft spread	Fuschia/red tubular flowers
		Prairie Coneflower (<i>Ratibida columnifera</i>)	top/mid	2.5ft tall, 2ft spread	Red and yellow flowers with tall seedheads
17	Yellow Indiangrass	Alkali Sacaton (<i>Sporobolus airoides</i>)	top	3.5ft tall, 2ft spread	fine texture, golden/bronze in fall/winter
		Little Bluestem (<i>Schizachyrium scoparium</i>)	top	2.5ft tall, 2ft spread	blue-ish stems turn reddish brown when mature

TIERS: **Top:** lowest water requirements, planted along the garden berm; **Mid:** average water requirement, planted on the sloping sides of the garden; **Low:** higher water requirements, planted in the basin, roots must withstand wet conditions up to 12 hours

Plant Care Guide: Full Sun Layout 2



1. Black-eyed Susans (*Rudbeckia hirta*)

Mature Height	3ft tall with 12-18 inch spread
Care & Water	Full sun perennial. Prefers well draining soil, water sparingly after establishment (water once a week or when the top inch of soil around the plant is dry).
Flowering Time	June to September, blooms yellow/orange
Hardiness	Zones 3-9, plant 18" apart
Special Features and Notes	Attracts butterflies and other pollinators. Remove flowers after they dry (called deadheading) to prolong blooming and reduce self-sowing. Susceptible to powdery mildew- avoid overwatering.



2. Blue Grama (*Bouteloua gracilis*)

Mature Height	6 to 18 inches tall with 12 to 18 inch spread
Care & Water	Once established, water once per week. This species will go dormant without rainfall/irrigation and turn light brown but is not dead.
Flowering Time	Insignificant flowering August to September (seedheads attractive)
Hardiness	Warm season bunch grass, hardiness zones 4-9, plant 20" apart
Special Features and Notes	State grass of Colorado! Very drought tolerant (xeric plant) but does not tolerate foot traffic.

Plant Care Guide: Full Sun Layout 2



3. Blue Flax (*Linum lewisii*)

Mature Height	1-2ft tall with 1-2ft spread
Care & Water	Xeric plant once established, water once per week.
Flowering Time	May and June, delicate light blue flowers
Hardiness	Zone 4-7, heat and drought tolerant, plant 18" apart
Special Features and Notes	The flowers open in the morning and last only one day, but the plant flowers profusely. It will self seed once established and has no serious pest or disease issues. Attracts birds and butterflies.



4. Butterfly Weed (*Asclepias tuberosa*)

Mature Height	2-3ft tall and 15-18 inch spread
Care & Water	Water once per week once established.
Flowering Time	May-August, bright orange blooms (seedpods and foliage also attractive)
Hardiness	Zones 4-9, plant 18" apart
Special Features and Notes	Great for rocky/sandy soils. Vital to butterfly and moth populations such as Monarchs while migrating. Also attracts hummingbirds and bees.

Plant Care Guide: Full Sun Layout 2



5. Chocolate Flower (*Berlandiera lyrata*)

Mature Height	1-2ft tall and 1-2ft wide
Care & Water	Once established, water once per week. Very resilient.
Flowering Time	Late April-July
Hardiness	Zones 4-10, plant 24” apart
Special Features and Notes	The flowers smell like chocolate and are edible! Attracts pollinators with their scent. Deadhead to promote flower production. In zone 5 it is an annual but reseeds aggressively so it will come back up the year after planting in the spring.



6. Coreopsis Tickseed (*Coreopsis spp*)

Mature Height	1-2ft tall with 1-2ft spread, rounded growth habit.
Care & Water	Once established, water once per week.
Flowering Time	June-September
Hardiness	Zones 4-9, plant 8” apart
Special Features and Notes	There are many cultivars and varieties of coreopsis with different flower colors and features. Deer resistant.

Plant Care Guide: Full Sun Layout 2



7. Coronado Hyssop (*Agastache aurantiaca* “Coronado”)

Mature Height	1.5-2.5ft tall and 1-2ft spread, upright growth habit.
Care & Water	Once established, water once per week.
Flowering Time	June-August
Hardiness	Zones 6-9, plant 12” apart
Special Features and Notes	Also called Hummingbird Mint, the birds are attracted to the fragrance of the flowers. Deer and rabbit resistant.

8. Desert Four o’Clock (*Mirabilis multiflora*)



Mature Height	2ft tall and 3ft spread, rounded
Care & Water	Once established it is xeric, water once per week.
Flowering Time	May-September, bright pink flowers open in the afternoon
Hardiness	Zones 4-8, very drought tolerant, plant 18” apart
Special Features and Notes	Attracts butterflies, hummingbirds, nocturnal insects, and bees. Great for erosion control due to its robust root systems. Rabbit and deer resistant.

Plant Care Guide: Full Sun Layout 2



9. Desert Penstemon/Beardtongue (*Penstemon pseudospectabilis*)

Mature Height	3ft tall and 18 inch spread, rounded growth habit
Care & Water	Once established water once per week. They do well in poor, low fertility soil.
Flowering Time	May-July, deep pink/red flowers
Hardiness	Zones 5-9, plant 20" apart
Special Features and Notes	Attracts butterflies, bees, and hummingbirds. Deer resistant. Reseeds aggressively like chocolate flowers and flax.



10. Purple Coneflower (*Echinacea purpurea*)

Mature Height	2-4ft tall and 2ft wide, upright growth habit.
Care & Water	Once established, water once per week.
Flowering Time	July-September
Hardiness	Zones 3-9, plant 18" apart
Special Features and Notes	Attracts pollinators while blooming, after flowers are finished the seed heads then attract songbirds. Deer resistant.

Plant Care Guide: Full Sun Layout 2



11. Firecracker Penstemon (*Penstemon eatonii*)

Mature Height	2-3ft tall and 2-3ft spread. Upright growth habit.
Care & Water	Once established, water once per week. Very drought tolerant.
Flowering Time	May-August, red flowers.
Hardiness	Zones 5-9, plant 20" apart
Special Features and Notes	Deer resistant. Fibrous root system great for water-wise landscaping and erosion prevention. Rocky/sandy soils with good drainage are preferred.



12. Harebells/Bluebells (*Campanula rotundifolia*)

Mature Height	1ft tall and 1ft spread, stems are weak and the plant often bends over.
Care & Water	Once established, water once per week.
Flowering Time	June-September, periwinkle color flowers.
Hardiness	Zones 2-7, plant 6" apart
Special Features and Notes	Attracts hummingbirds. When grown from seed, the plants start blooming the second year.

Plant Care Guide: Full Sun Layout 2



13. Indian Ricegrass (*Achnatherum hymenoides*)

Mature Height	1-3ft tall with 1-2ft spread
Care & Water	Once established, water once per week
Flowering Time	June-September, flowers are small and yellow or green
Hardiness	Zones 3-9, plant 24" apart
Special Features and Notes	Seeds are harvested by birds and small mammals. Great for soil retention and erosion control.



14. Little Bluestem (*Schizachyrium scoparium*)

Mature Height	1-2ft tall and 2ft spread, seed bearing stems grow to 3ft.
Care & Water	Once established, water once per week.
Flowering Time	June-December
Hardiness	Zones 3-9, plant 20" apart
Special Features and Notes	Attracts butterflies and birds, it is a host for butterfly and skipper larvae and is used by birds for nesting material. Deer resistant.

Plant Care Guide: Full Sun Layout 2



15. Switchgrass (*Panicum virgatum*)

Mature Height	3-6ft with 2-3ft spread, upright growth habit.
Care & Water	Once established, water once per week.
Flowering Time	August-October
Hardiness	Zones 3-9, plant 18" apart
Special Features and Notes	Attracts birds and butterflies. Deer resistant.



16. Sunset Hyssop (*Agastache rupestris*)

Mature Height	3-4ft tall and 18 inch spread
Care & Water	Once established, water once per week.
Flowering Time	May-September, pink or orange blooms.
Hardiness	Zones 5-9, plant 18" apart
Special Features and Notes	Attracts hummingbirds and other birds. Deer and rabbit resistant. Its flower fragrance is described as spicy.

Plant Care Guide: Full Sun Layout 2



17. Yellow Indiangrass (*Sorghastrum nutans*)

Mature Height	3-6ft tall 2-3ft wide
Care & Water	Once established, water once per week.
Flowering Time	August-October
Hardiness	Zones 4-9, plant 24” apart
Special Features and Notes	The fluffy seed heads look great in flower arrangements! Birds harvest the seeds and use the grass as nesting material.